

National Marine Sanctuaries
National Oceanic and Atmospheric Administration

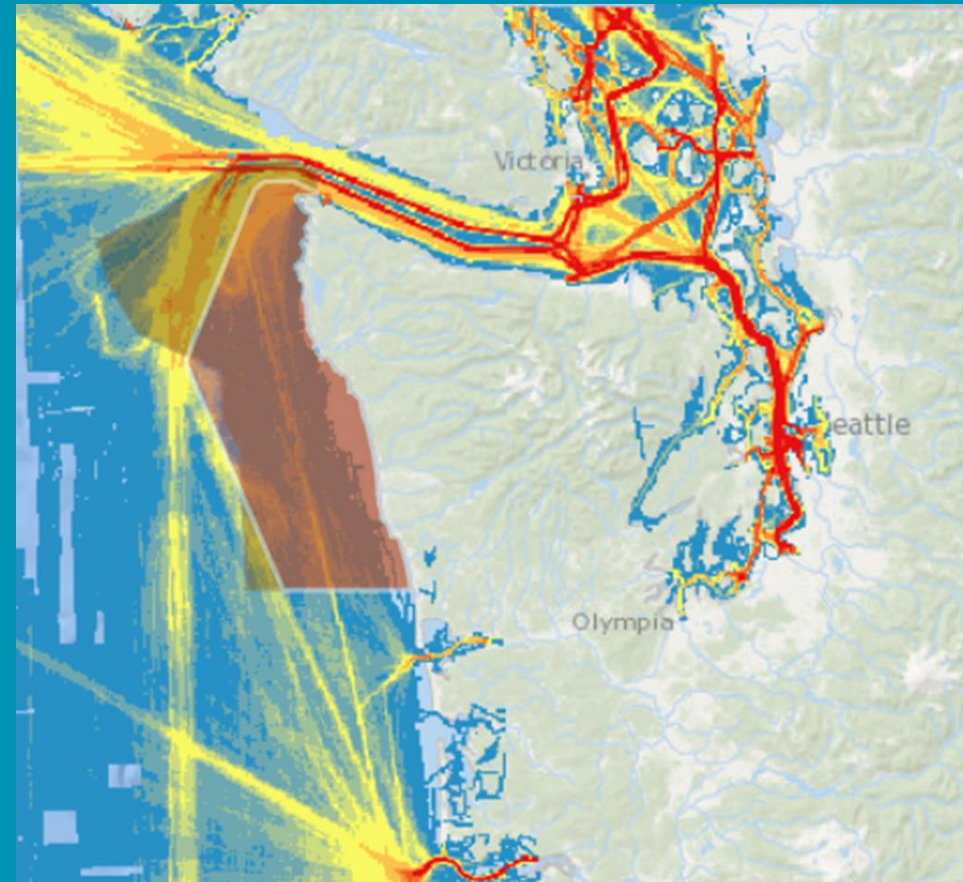


NATIONAL MARINE
SANCTUARIES

OLYMPIC COAST

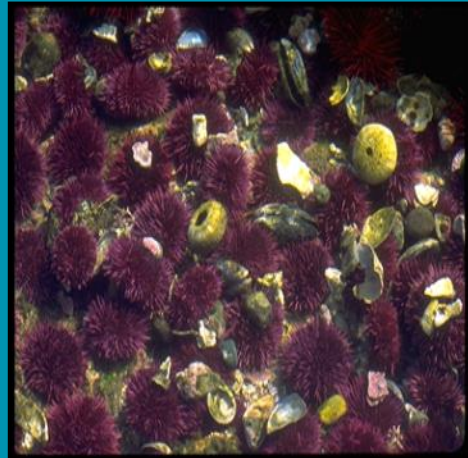
Olympic Coast Vessel Traffic Management

September 26, 2014
George Galasso



Goals of the Presentation

- Overview of vessel traffic management
- OCNMS monitoring-outreach program
- Emergent issues
- Context and information to assist the NPCMRC's consideration of related topics (Where and how to engage?)

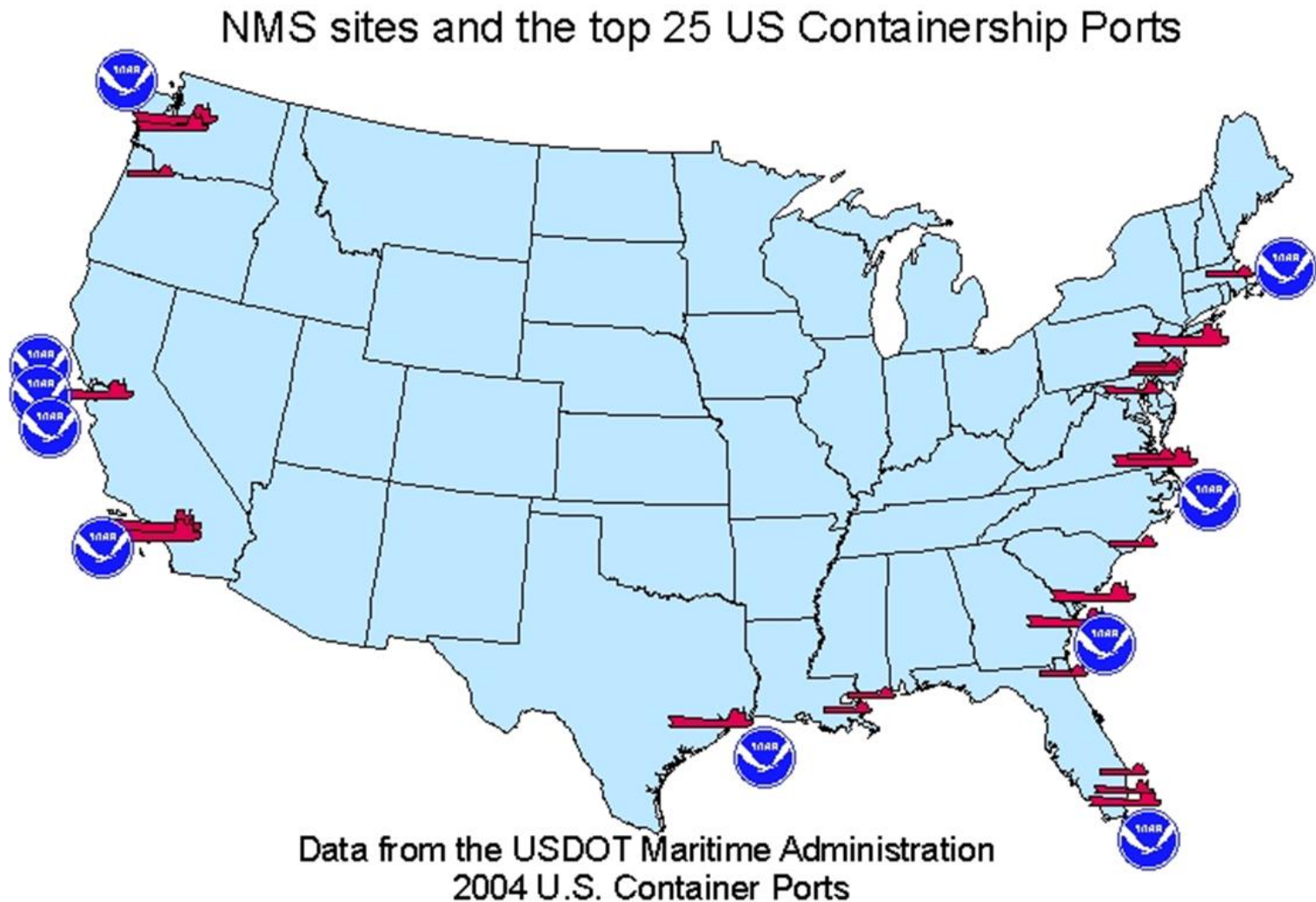


Maritime Safety

- Maritime Safety System (USCG & IMO)
 - Traffic management
 - Navigation
 - Inspections
 - SAR
- Technology
 - Communications
 - Navigation
 - Forecasts
- People
 - Training
 - Licensing



Shipping and Sanctuaries



The Challenge

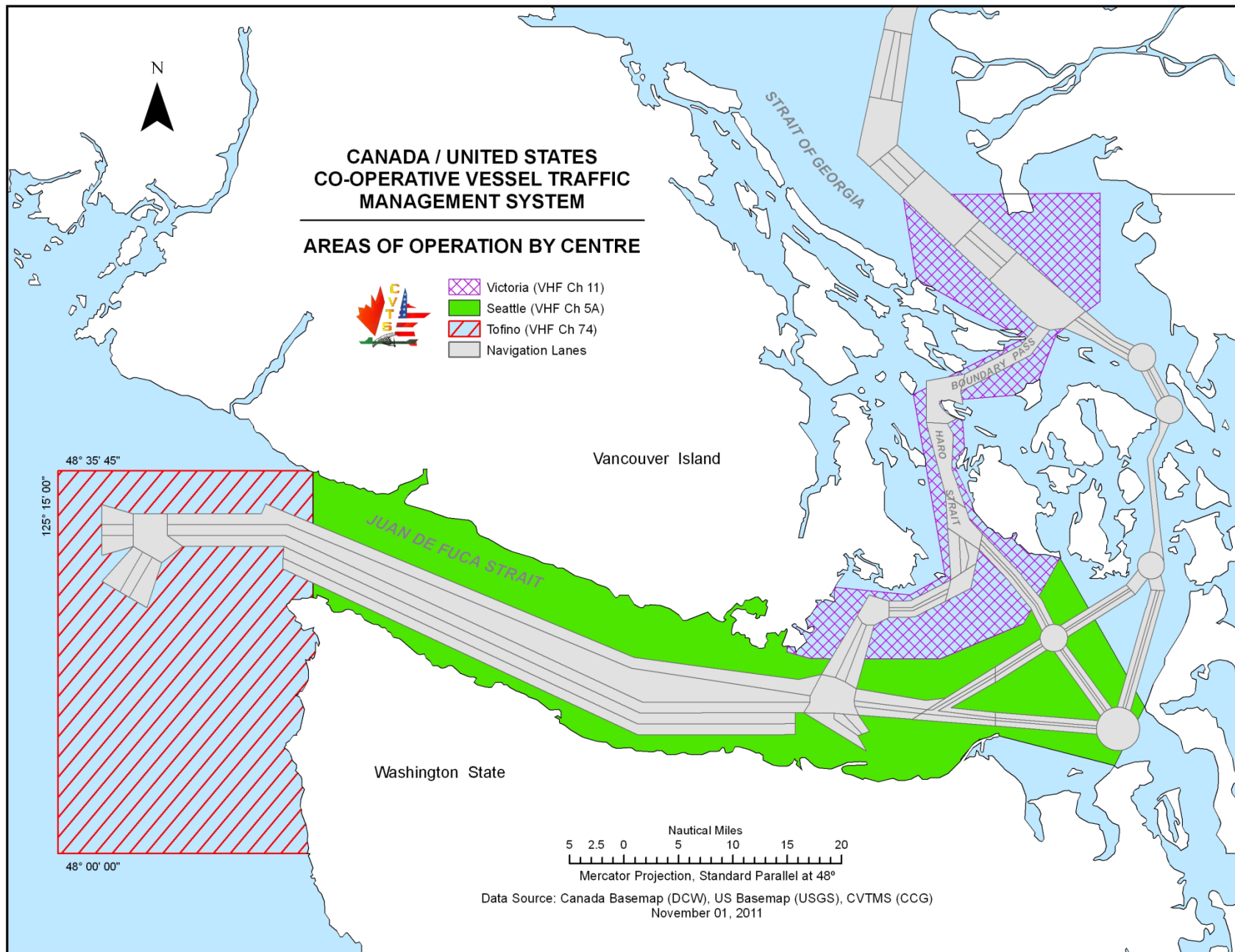
(NOAA Perspective)



Ensure that the transportation of commodities through the sanctuaries remains compatible with the protection of sanctuary resources!

OCNMS Vessel Traffic Background

- Oil spill concerns during designation
- Establishment of ATBA
- CVTS management
- ATBA monitoring and outreach program
- Early work with Canadian Coast Guard
- Marine Exchange of Puget Sound AIS
- exactEarth S-AIS demonstration project



VTS Locations

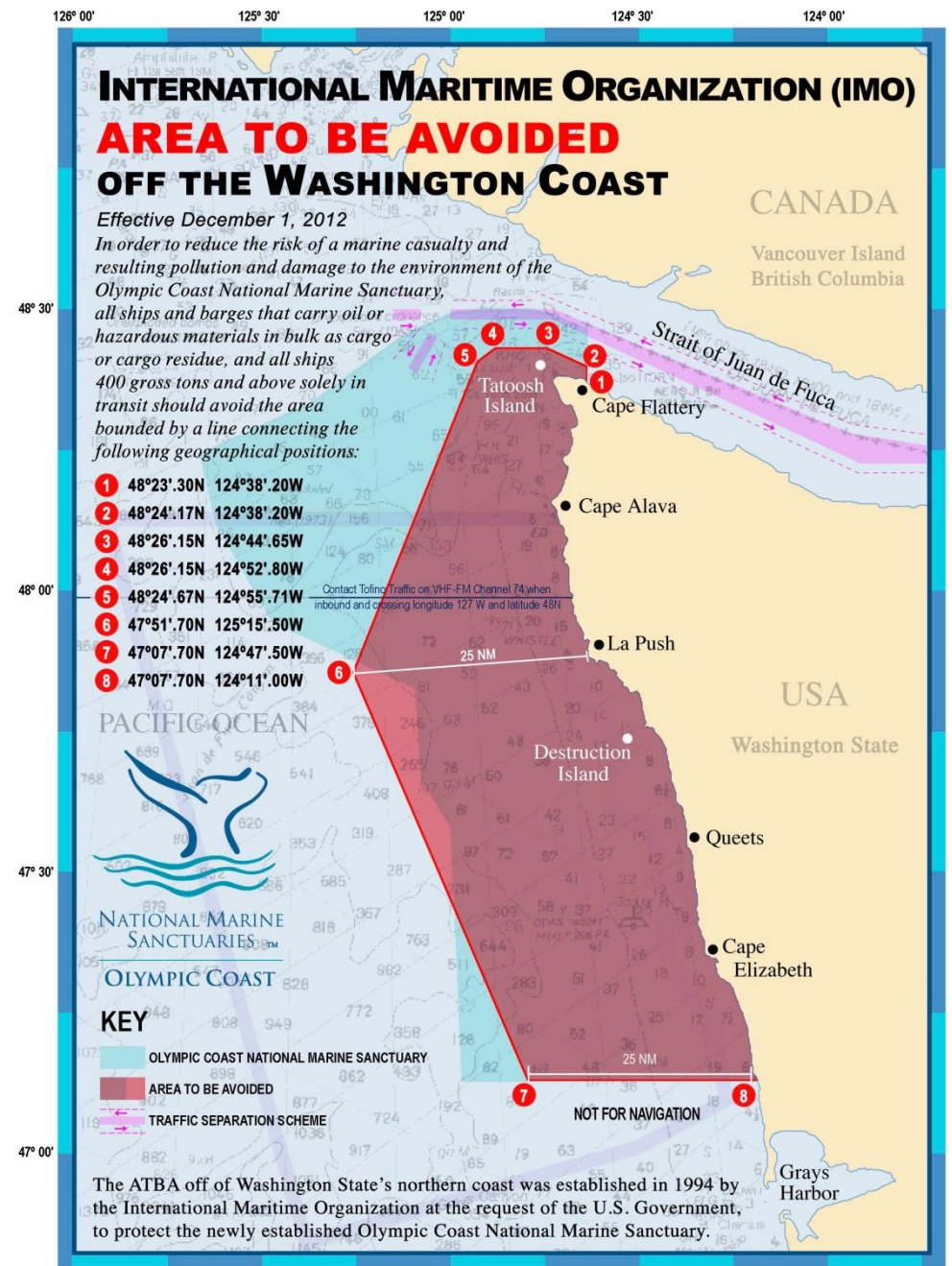
★ USCG operated

★ USCG-local Partnership



ATBA Program

- OCNMS ATBA Goals
- Education & Outreach
- Monitoring

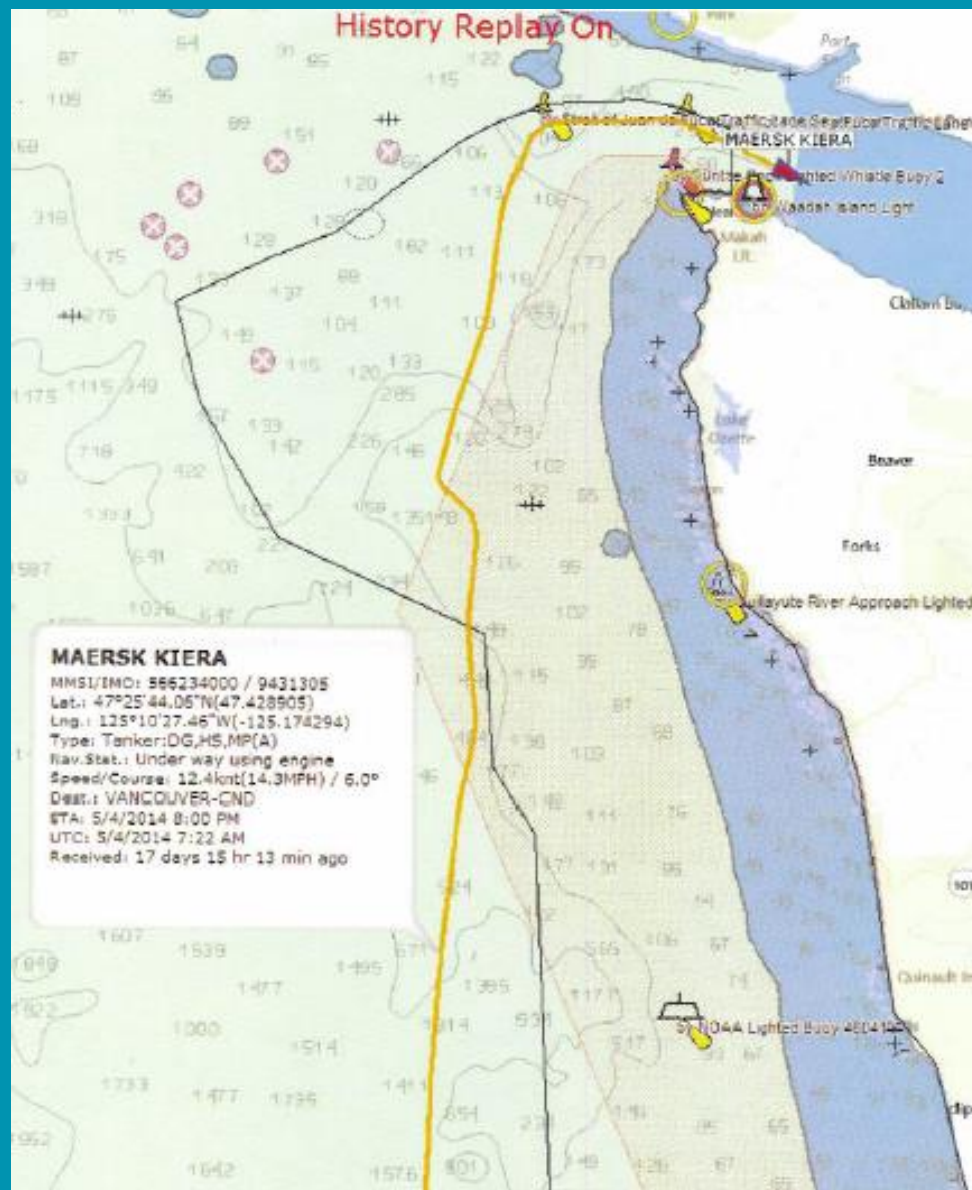




COOPERATIVE VESSEL TRAFFIC SERVICES Washington State ATBA Incursion Report

CVIS Centre Tofino MCTS	Date 2014/05/04	TIME 0212PDT	TRACKING NUMBER: T14-016
Name of Ship: MAERSK KIERA	IMO No. 9431305	Call Sign 9V8527	
Last Port of Call HOUSTON, USA	Destination Port of Call VANCOUVER, CAN	Flag / Nationality SINGAPORE	
Ship or Barge Type TANKER	Ship Length 183M	Load Condition / Cargo (If Known) DIESEL & ETHANOL	Ship Tonnage (DWT or GRT) 24463GRT
Detail of when vessel was first observed in ATBA			
Date/Time: 2014/05/04 0212PDT	Position: 47 48.6N 125 07.2W	Course: 356T	Speed: 12.8KTS
DATE / TIME	Narrative of Events (Include reason for incursion - WX, Traffic Congestion, other)		
04/0212PDT	VESSEL OBSERVED ON AIS OUTSIDE TOFINO TRAFFIC ZONE, INSIDE ATBA		
04/0248PDT	VESSEL CONTACTED ON VHF16 AND ADVISED TO CHECK CHARTS FOR ATBA		
04/0253PDT	VESSEL ADVISED TOFINO TRAFFIC THAT THEY WERE ALTERING COURSE TO PORT TO EXIT ATBA.		
04/0315PDT	VESSEL OBSERVED LEAVING ATBA AT 48 01.2N 125 09.9W		
Signatures -			
Marine Traffic Regulator S. WHITWORTH		Other Information If required	
Watch Supervisor NONE			
Officer in Charge NONE			
SENT TO:	Date/Time Sent	Initials	Other Info
RMIC	04/0330PDT	SW	
Other (Seattle Traffic)	04/0330PDT	SW	

REVISED: (1) 01JAN 2008



U.S. Department of
Homeland Security

United States
Coast Guard



May 22, 2014

MAERSK TANKERS A/S
Esplanaden 50
1263 Copenhagen, DK
DENMARK

Dear fellow mariner,

The purpose of this letter is to advise you that your vessel, the *MAERSK KIERA*, was observed transiting the designated International Maritime Organization (IMO) Area to be Avoided (ATBA) along the Northern Coast of Washington contrary to the recommendations of the IMO. We solicit your company's commitment and support of the voluntary ATBA designated in 1995 and modified in 2002 and 2012 to protect the resources within the Olympic Coast National Marine Sanctuary (sanctuary). The ATBA originally applied to all vessels transiting with cargoes of oil or hazardous materials, effective December 1, 2012, the applicability was extended to also include all vessels over 400 gross tons. Please see the enclosed plot for specific information we have regarding the *MAERSK KIERA*'s transit of this area.

The Olympic Coast National Marine Sanctuary and the U.S. Coast Guard Sector Puget Sound are committed to the long-term protection of the nationally significant marine resources of the sanctuary by enhancing marine safety and environmental awareness in the marine community. The sanctuary has been monitoring the ATBA since 1996 and has had excellent cooperation from the maritime community.

To assist in our efforts, the enclosed informational flyer was designed and distributed in consultation with a number of agency and industry experts. We hope that it will clarify the purpose and applicability of the ATBA routing measure and we trust that we will enjoy your voluntary support. Any feedback regarding this transit should be forwarded to the Olympic Coast National Marine Sanctuary, 115 East Railroad Avenue, Port Angeles, WA 98362-2925; george.galasso@noaa.gov; or phone (360) 457-6622 (extension 12). More information on the ATBA can be found at <http://olympiccoast.noaa.gov/protect/incidentresponse/atba.html>. Thank you for your cooperation.

M. W. Raymond
Captain, U.S. Coast Guard
Commander, Sector Puget Sound

Carol Bernthal, Superintendent
Olympic Coast National Marine Sanctuary

Enclosures (2)



Uses of Vessel Traffic Data

(Environmental & Safety Forensics)

- Compliance with regulations/advisories
- Sanctuary management issues
 - Identification of conflicts with wildlife
 - Ocean noise
 - Identification of user conflicts
- Marine spatial planning
- Incident monitoring and response
- Maritime safety and accident investigation

2013 Estimated ATBA Compliance

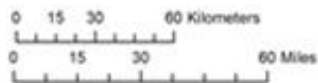
Vessel Type	Outer Washington Coast Transits	Sanctuary Transits	ATBA Transits	Estimated ATBA Compliance Rate
Bulk Carrier	4620	1306	11	99.2%
Cable Layer	13	4	0	100.0%
Cargo Ship	418	137	2	98.5%
Chemical Carrier	252	110	1	99.1%
Container Ship	2192	849	3	99.6%
Dredger	27	0	0	
Drill Ship	4	2	0	100.0%
Fishing Vessel	363	132	59	55.3%
Liquefied Gas Carrier	19	7	0	100.0%
Oil Tanker	973	553	3	99.5%
Passenger Ship	389	180	4	97.8%
Pollution Control	14	5	3	40.0%
Private Vessel	33	22	14	36.4%
Refrigerated Cargo	25	8	0	100.0%
Research Ship	58	33	10	69.7%
RoRo Cargo Ship	302	102	0	100.0%
Supply Ship	20	8	0	100.0%
Tug	661	375	17	95.5%
Vehicle Carriers	815	360	0	100.0%
TOTAL	11,198	4,193	127	97.0%

Cargo Ship Use of WA Outer Coast - 2013

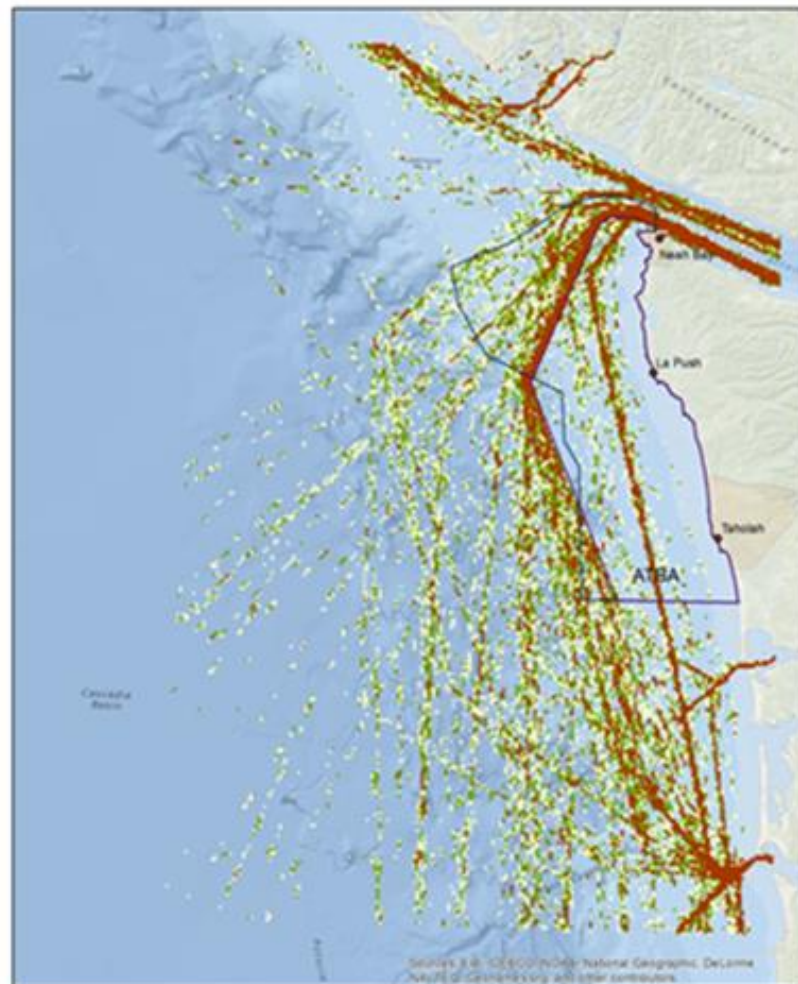


Cargo Ship - 2013

- Low use
- Regular transits
- Ports, traffic lanes, heavy use

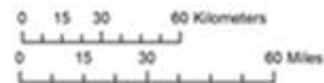


Tug Use of WA Outer Coast - 2013

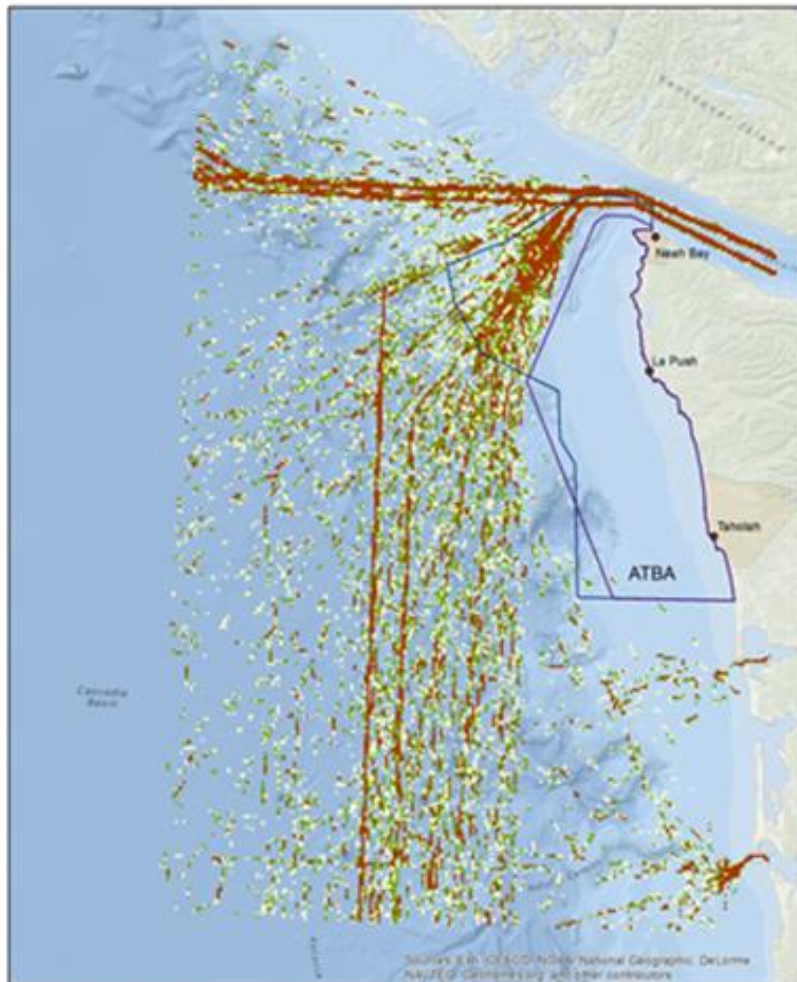


Tug Monitoring - 2013

- Low use
- Regular transits
- Ports, traffic lanes, heavy use

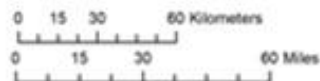


Tanker Use of WA Outer Coast - 2013

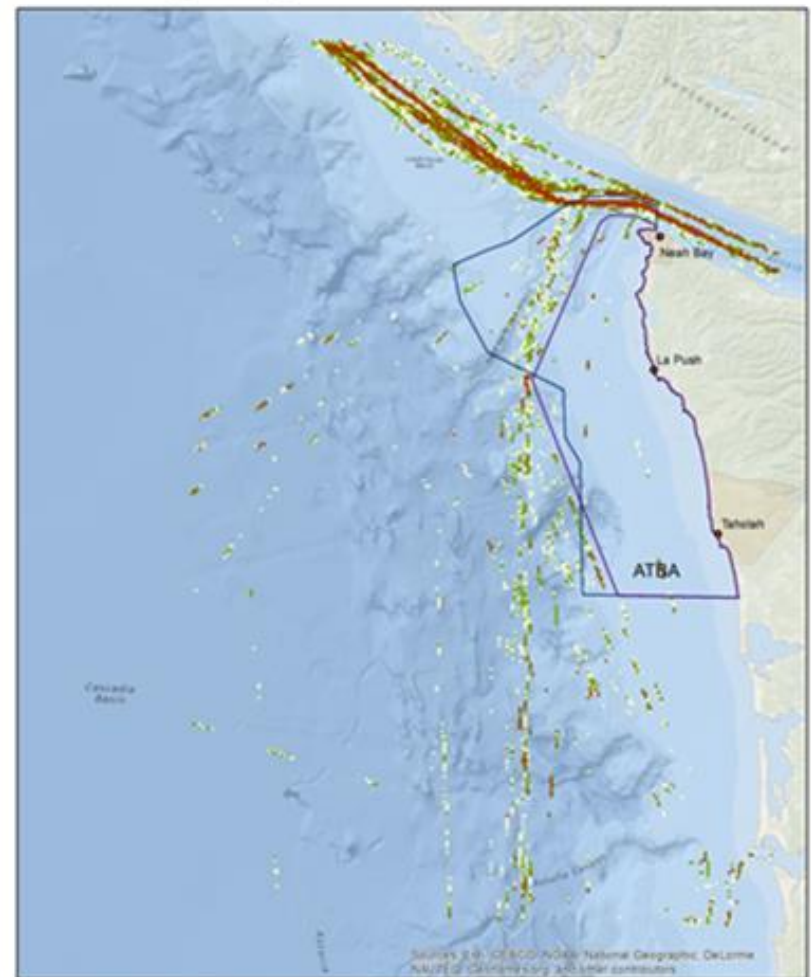


Tankers - 2013

- Low use
- Regular transits
- Ports, traffic lanes, heavy use

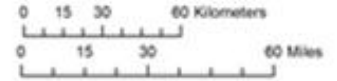


Passenger Ship Use of WA Outer Coast - 2013

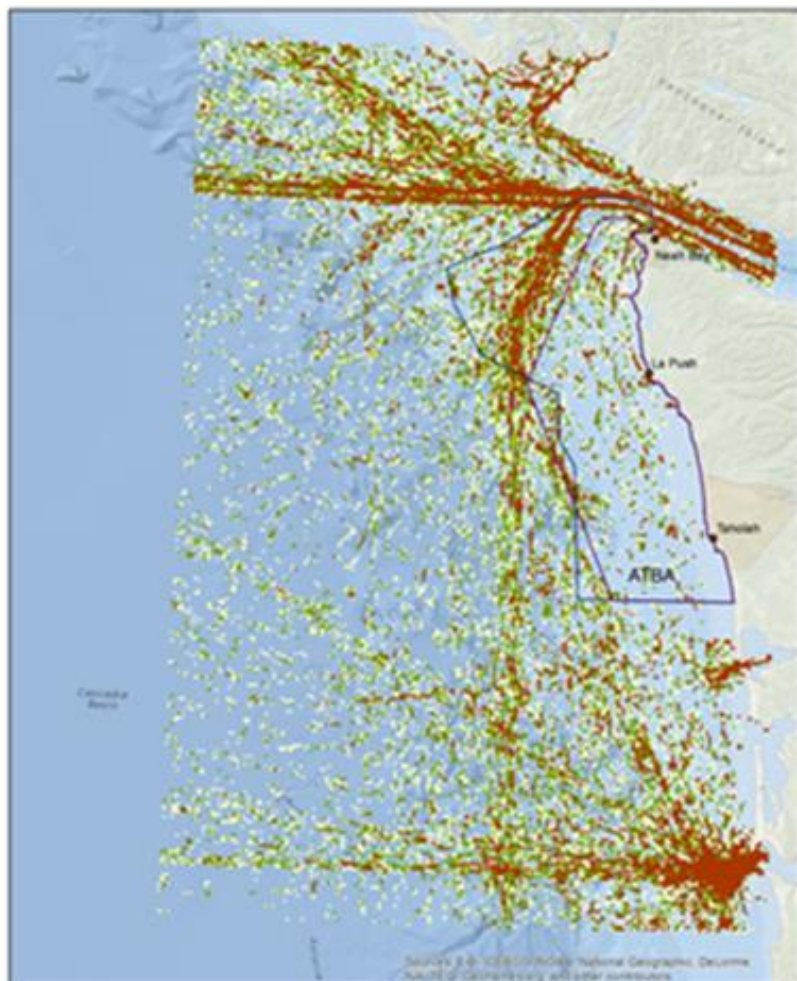


Passenger Ships - 2013

- Low use
- Regular transits
- Ports, traffic lanes, heavy use



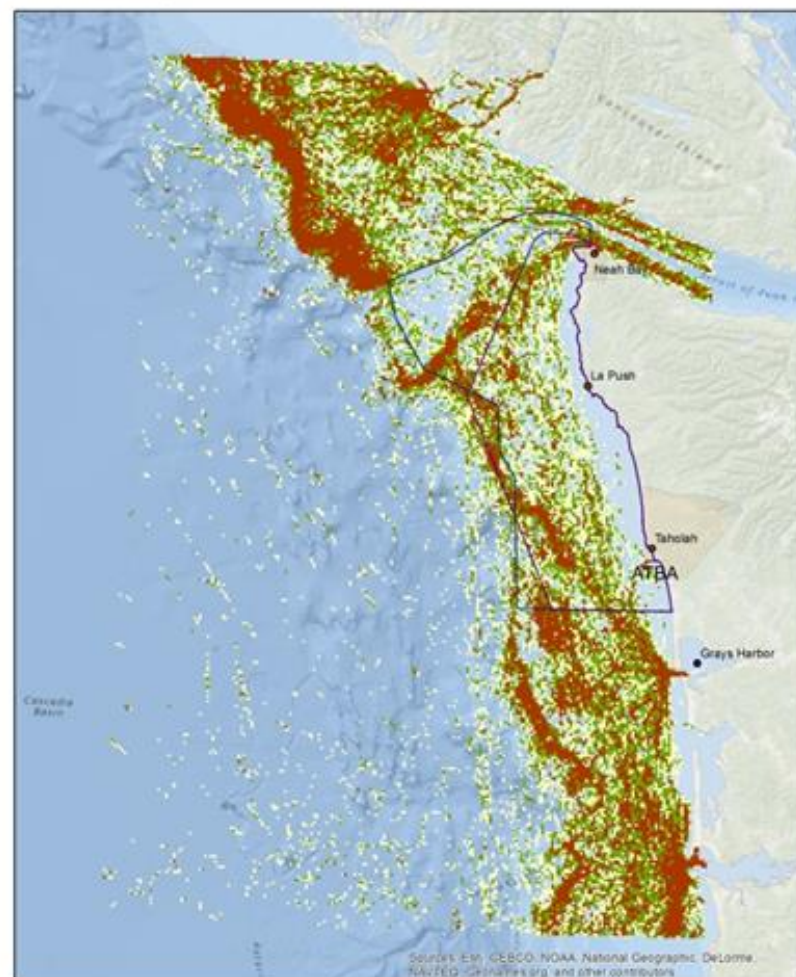
Miscellaneous Vessel Use of WA Outer Coast - 2013



Miscellaneous Vessels - 2013



Fishing Vessel Use of WA Outer Coast - 2013



Fishing Vessels - 2013



Emergent Issues (some)

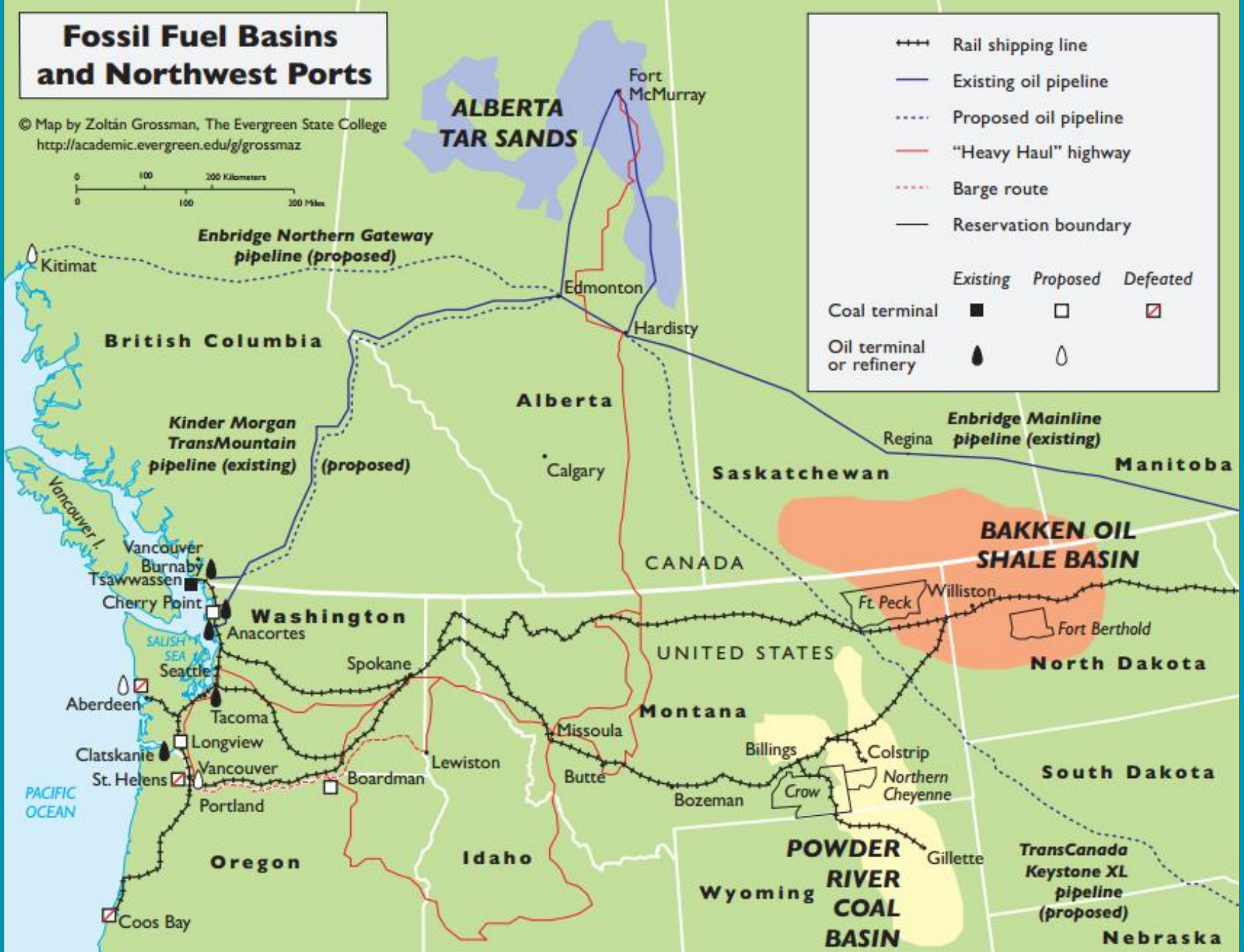
- Vessel Traffic Risk Assessment (VTRA)
- New Products
 - Alberta Oil Sands
 - Bakken Crude Oil
- New Delivery Systems
 - Crude by Rail
 - New Port Facilities
- Air Pollution
- Acoustic Impacts
- Ship Strikes



Fossil Fuel Basins and Northwest Ports

© Map by Zoltán Grossman, The Evergreen State College
<http://academic.evergreen.edu/g/grossmaz>

0 100 200 Kilometers
 0 100 200 Miles

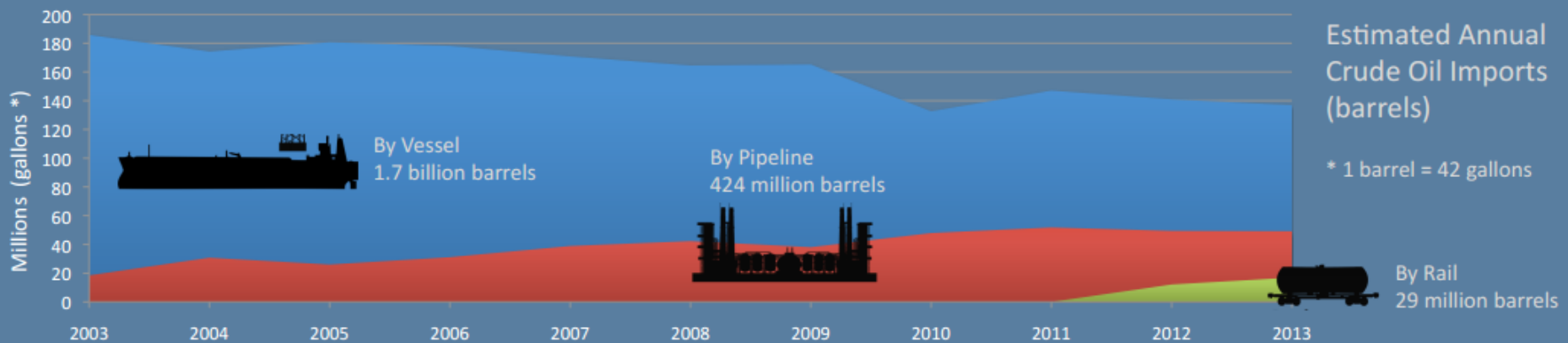
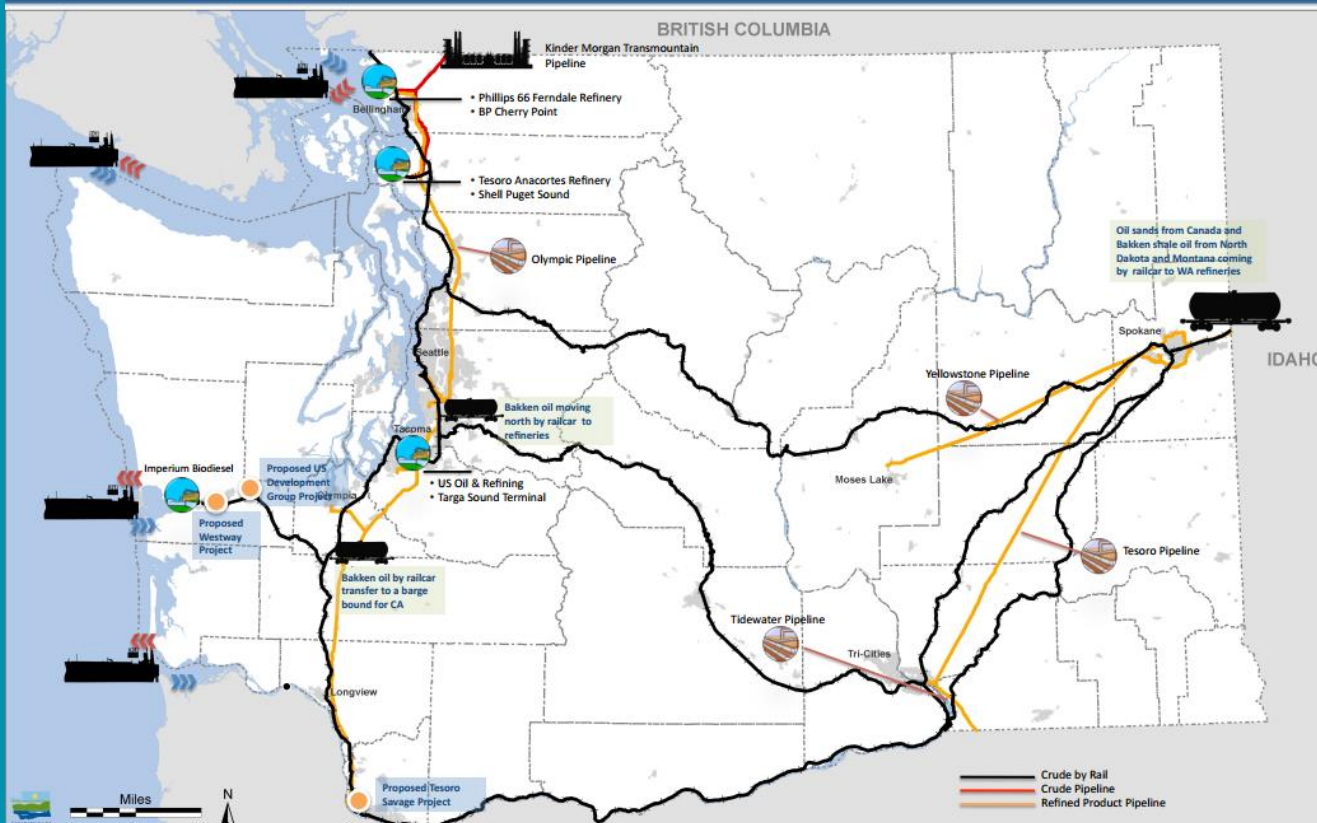


Overall Emerging Risk Picture

NWAC Emerging Risks Task Force

- Shift to oil transportation by rail, with associated predicted decreases by vessels
- Potential increase in cargo ships
- Potential increase in crude oil being shipped from Canada
- Potential increase in tank ships moving oil from rail terminals to refineries

CONCEPTUAL MODEL OF OIL MOVEMENT IN & OUT OF WASHINGTON STATE

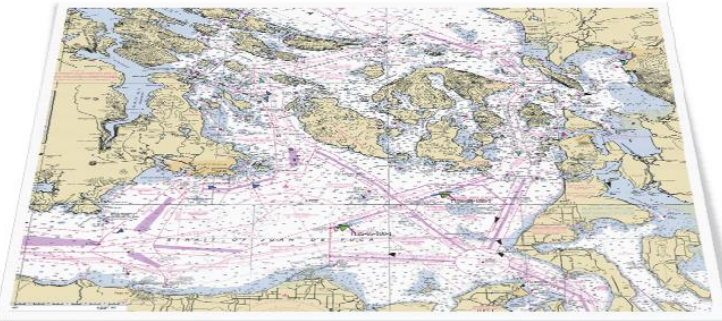


Vessel Traffic Risk Assessment (VTRA)

- Joint effort of the Puget Sound Partnership & Puget Sound Harbor Safety Committee
- George Washington University
- Final Report – March 2014

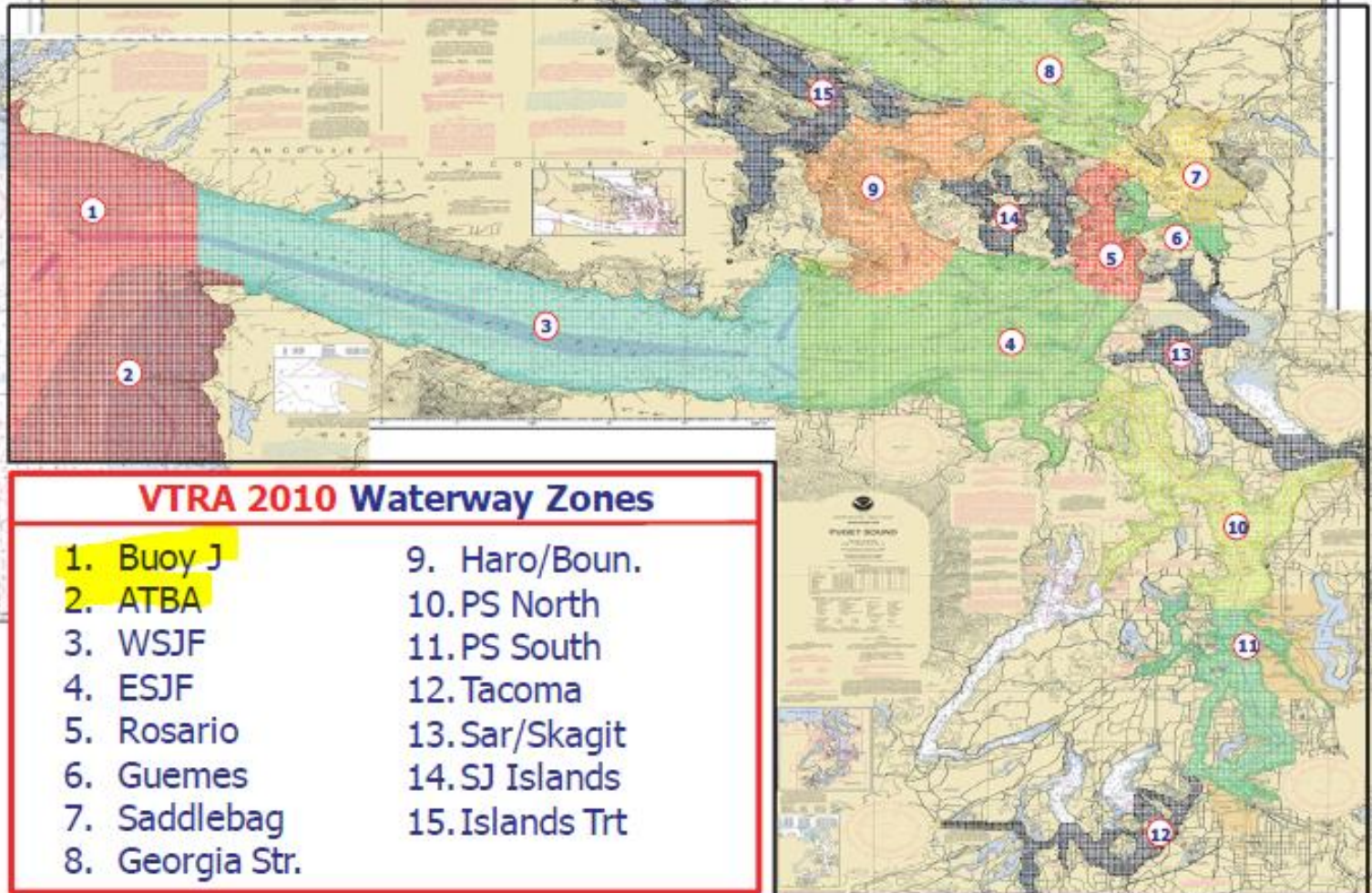
VTRA 2010 FINAL REPORT

Preventing Oil Spills from Large Ships and Barges
In Northern Puget Sound & Strait of Juan de Fuca



VTRA Study Area

DEFINITION OF 15 WATERWAY ZONES



Vessel Traffic Risk Assessment (VTRA)

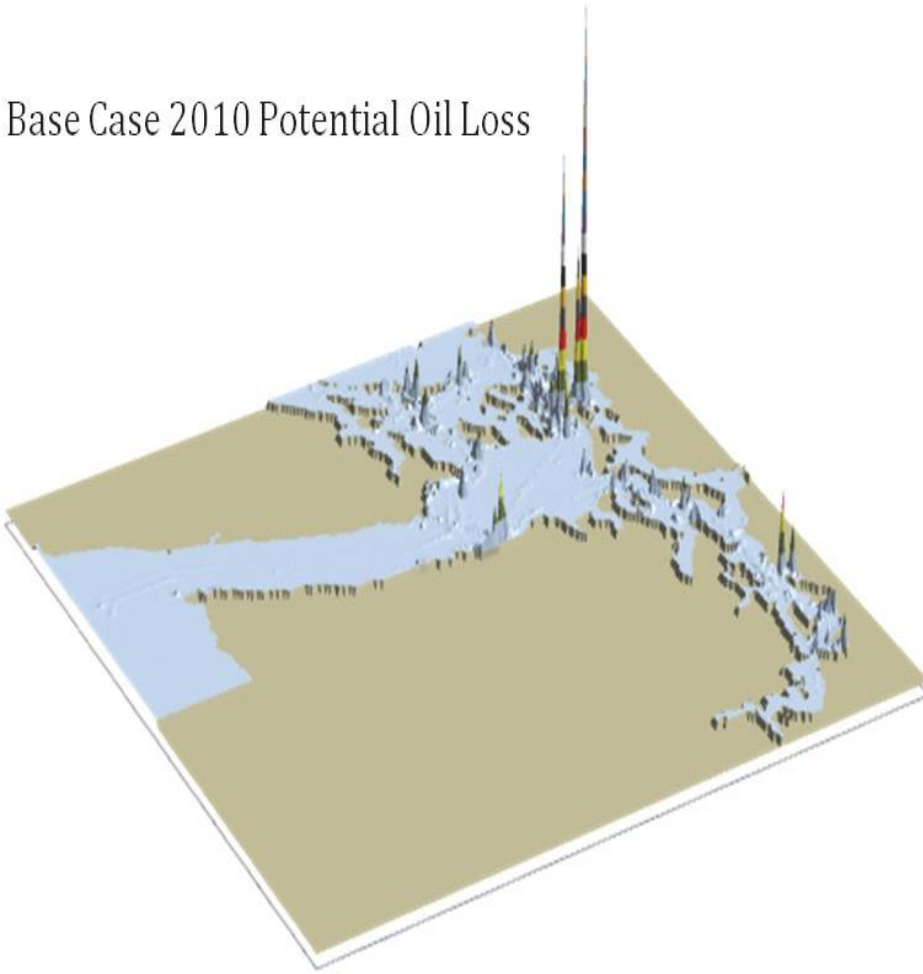
- Evaluate potential changes in risk
- Focuses on 3 proposed projects
 - Gateway terminal - Cherry Point, WA
 - Trans-Mountain pipeline expansion - Vancouver, BC
 - Coal, grain and container expansions - Delta Port, BC

Vessel Traffic Risk Assessment (VTRA)

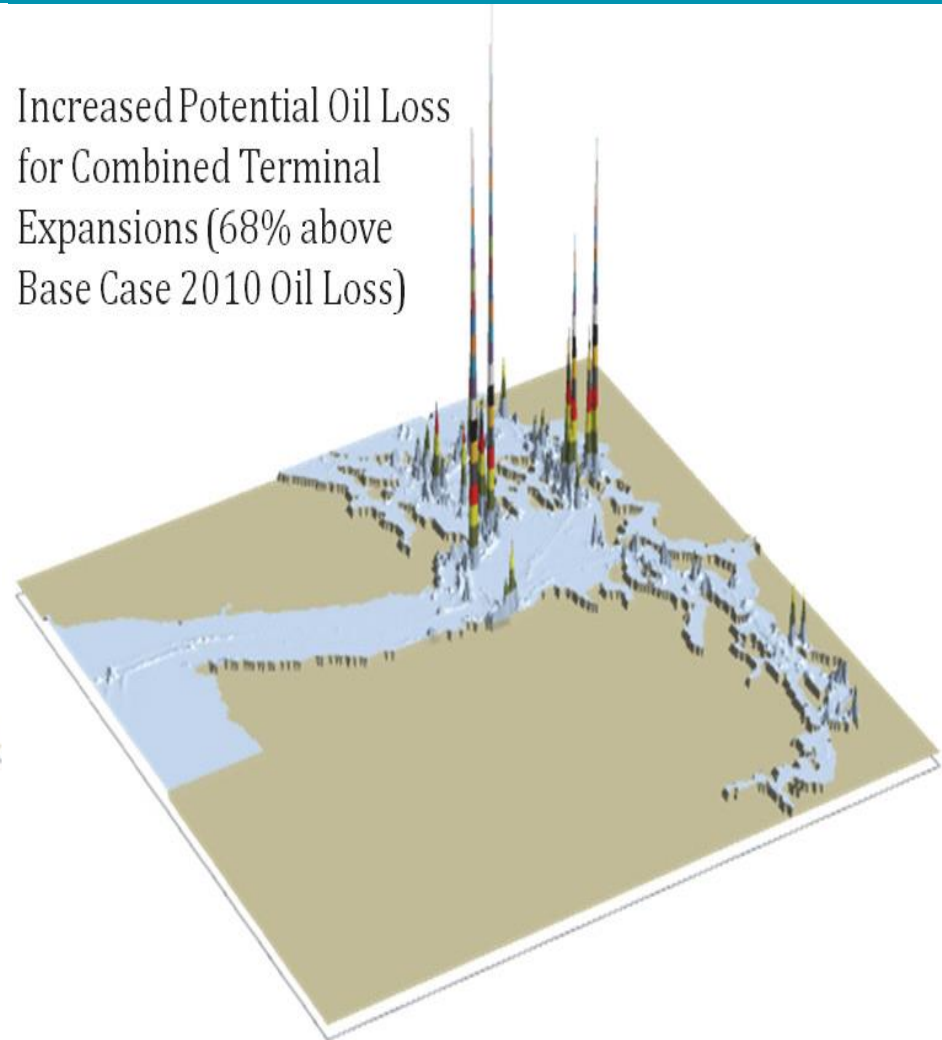
- Uses 2010 data to establish vessel numbers, types and traffic patterns
- VTRA area includes 15 zones
- Vessel Time Exposure (VTA)
 - Vessel type
 - Potential accident frequency
 - Potential oil losses
- Base case and 4 what-ifs

Potential Change in Risk

Base Case 2010 Potential Oil Loss

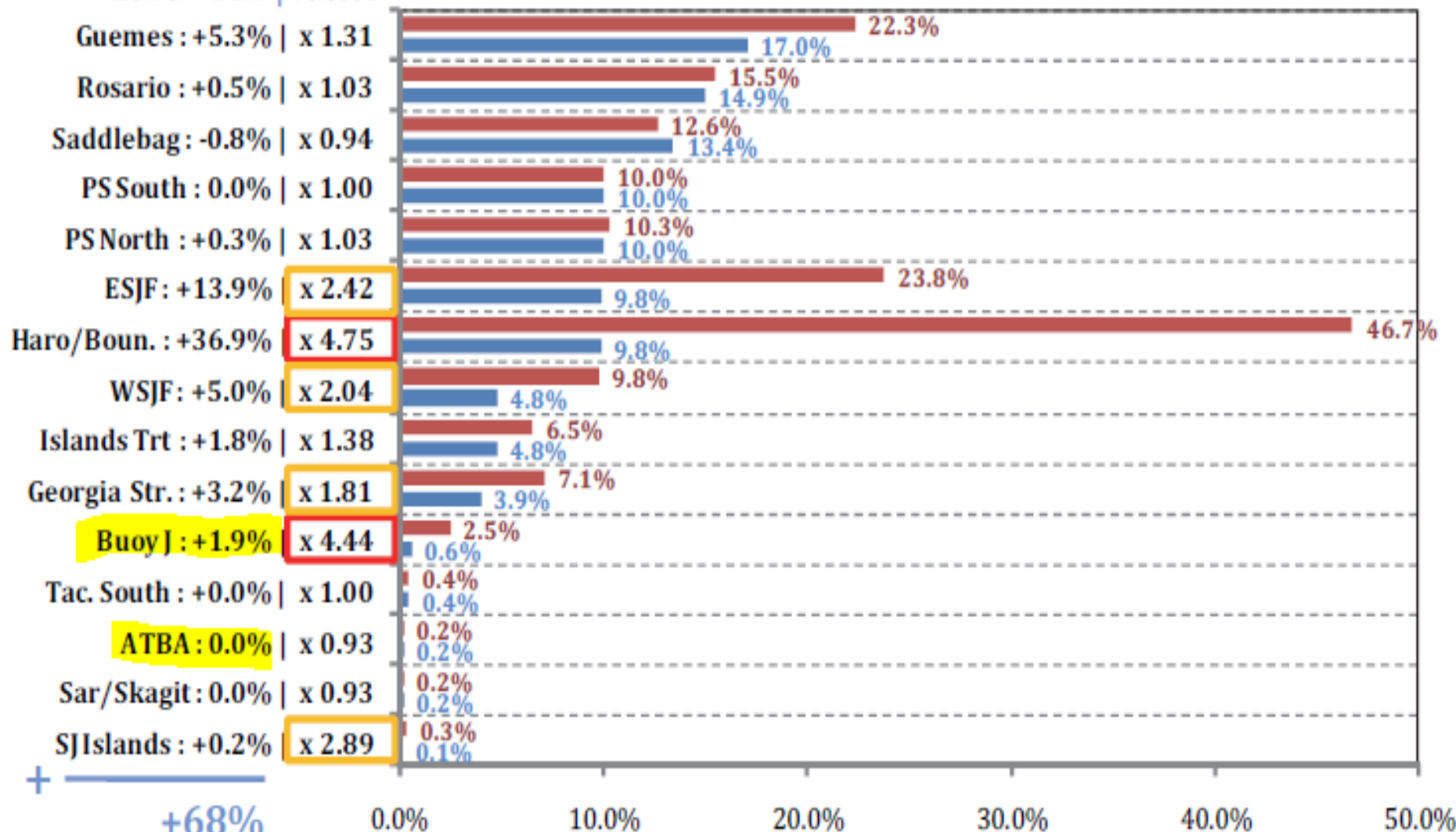


Increased Potential Oil Loss
for Combined Terminal
Expansions (68% above
Base Case 2010 Oil Loss)



Comparison of Potential Oil Loss by Waterway Zone

Zone: Diff. | Factor



% Base Case Pot. Oil Loss (POL) - ALL_FV

CASE-T

T: GW - KM - DP : 168% (+68.2% x 1.68)

P: Base Case : 100%

2014 Marine and Rail Oil Transportation Study – Study Outline

- Current Oil Transportation Picture
- Anticipated Changes to Transportation Picture
- Current Safety Picture
- Anticipated Changes to Safety Picture
- Gap Analysis
- Recommendations
- Risk Communications Strategy



2014 Marine and Rail Oil Transportation Study – Deliverables

- September – Preliminary Findings
- September & October – Stakeholder Meetings
- October – Draft Interim Report to Governor
- November – Draft of Interim Report
- December – Interim Report to Legislature
- March – Final Report to Legislature

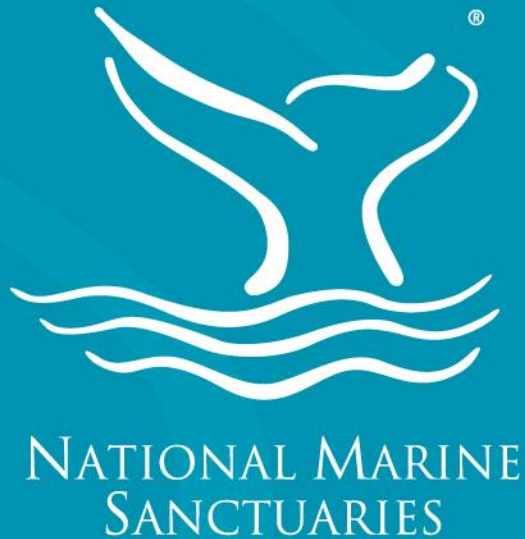


Discussion

- What are NPCMRC's interests in vessel traffic management?
- What are your information needs?
- What are the largest concerns?
- What is the most effective way to effect change?



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<http://sanctuaries.noaa.gov>